

REMARKS

Claims 1-7 still remain in the patent application.

The Examiner has disapproved the proposed amendment in the last office action and in light of the Examiner's suggestions, the drawings have been amended and are resubmitted herein for the approval of the Examiner. The proposed changes are made in red. As was pointed out in the earlier amendment, the plume shown in the drawings, particularly Figs. 4 and 6a were inadvertently drawn and a pencilled sketch is included to show the corrected drawing. The pencilled sketch is not considered a part of the drawings and are merely placed there to clarify the correct version. As stated in the specification and even in the title, this is a "convergent" gun where the atomized resin flows in a convergent plume. The solid ingredients are added to the plume by injecting them into the low pressure zone of the convergent spray. It is believed this aspect of the invention is adequately described throughout the specification and is detailed in the prior art patents cited therein.

Applicants wish to express gratitude to the Examiner for pointing out with particularity the inadvertent errors and particularly to the misnumbered reference numbers which obviously impeded the examination of this application.

Reconsideration of all the claims as being unpatentable over Black as the primary reference taken with Breitspecher, Schowiak, Warren in various combinations as applied to the different claims is respectfully requested. As it is believed that because the primary reference Black fails as a pertinent reference, it is believed that the rejection of all of the claims in the combinations purported by the Examiner must likewise fail for lack in pertinency.

The Examiner discharges the merit of the flats on the inner surface on the proposition that flats are well known as heretofore shown in the prior art that flats are used as one of ordinary skill appreciates as means for accommodating a wrench. Applicants do not quarrel with the fact that flats are in fact used in the outside world to accommodate wrenches, but fail to understand how that proposition applies to this particular case. The flats as defined in the claims are to form air gaps to allow the air to flow in a certain pattern to atomize the resin and hence, form the convergent spray being discharged from the gun. It appears, at least to applicants, that the Examiner is of the opinion that a particular shape of a nozzle, ipso facto, forms a convergent spray. As is disclosed in the prior art, there are a plurality of guns as is exemplified in the specification of the present application where certain configurations in the gun are designed to form the convergent spray. In the present invention the spray is formed by the particular fluid tip configured with the flats as fully detailed in the application. Moreover, this limitation is recited in the claims where it states that the convergent spray being discharged from gun as claimed in, for example, claim 1 defines a convergent plume with a low pressure zone at which point the solid material is injected into the spray before being delivered to the substrate. Black, on the other hand, and as understood by applicants is believed, in spite of the Examiner's conclusion, to discharge a cylindrical pattern and not the convergent spray pattern that is taught by the present invention. Moreover, Black appears to inject the solids before being discharged from the gun rather than injecting the solids into the spray downstream of the discharging nozzle. This is borne out by the description on column 2, lines 52-63, which are quoted below for the Examiner's convenience.

"The nozzle 14, for the end of the outer tube 11, as herein shown, comprises an extension 41 mounting, in its outer end, a ring 42 and secured to the end of outer tube 11 by a telescoping sleeve 43. The ring 42 has a circular port 44 at the end of tapered bore 45 embracing

the outer end of the extension 32. The space between the ring 43 and the extension 32 constitutes a chamber 46 (Fig. 3) wherein the respective substances, being discharged from the hereinafter-described nozzle 15 and moving along the extension 41, are integrated into an intimate mixture for discharge through the port 44 as indicated by the arrows 47." (Underline added)

As is described in the Black patent, the mixture is within the gun, albeit that the gun includes various upstream nozzles, and that the pattern of the reinforced lamina discharging from the gun can be changed by adjusting the ring 42. (See column 2, line 64 of Black).

It further appears that the air being injected into the gun in the Black gun structure does not form an atomized air stream to define a convergent stream as required in the present invention but rather the air is utilized to facilitate the movement of the viscous substance. (The examiner's attention is directed to column 3, line 43-46 of Black).

It is respectfully submitted that the teachings in the Black patent are remotely different from the teachings in the present invention and that the Black teachings lack in pertinency and there is no suggestions, in fact or implied that are pertinent to applicants' claimed invention and that the reference should be withdrawn. Since this patent lacks in pertinency the combination of this patent with the others relied on by the Examiner are believed to likewise lack in pertinency and they should also be withdrawn.

It appears that the issues are joined and that the only alternative that remains open to applicants is the appeal route. Before, taking this route, the Examiner is asked to reconsider the pertinency of the Black reference, and to again reconsider the interpretation given to this reference, which, at best is believed to be strained, in light of the following comments:

1) The Examiner states that Black "is considered to induce a convergent spray". Look at the arrows 47 in Fig 3 which suggests to applicants that Black does not create a convergent spray.

2) While applicants concur that "miniature" is relative, looking at the long extension 11 of Black in Fig. 2, it is believed, that one would be constrained to consider this gun to be miniaturized. It is also pointed out that applicant's employer has designed and are operate convergent spray nozzles heretofore and all of these designs require a robotics to hold the gun, while for the first time the gun built in accordance with the present invention allowed an individual to operate the gun utilizing but one hand.

3) Reconsider the language in claim 1 (first amendment) which states that "fluid tip including a circular shaped member abutting the inner surface of the air cap and having flats" when suggesting applicants are "arguing the specification and not the claimed limitations".

4) As applicants believe that the claimed invention is not obvious in light of 35 U.S.C. § 103(a) as purported by the Examiner and that all the claims patentably distinguish over the prior art individually and collectively, it is suggested that if the Examiner wants to discuss this matter further that he is invited to telephone the Attorney of record collect at 561-626-4111. Moreover, if the Examiner believes that the only reason that the claims are being rejected because the limitations being argued are not recited in the claims, applicants attorney would be happy to discuss this aspect further and welcomes suggestions that the Examiner wishes to make.

In view of the foregoing, it is believed this application is in condition for allowance and the allowance thereof is respectfully requested or alternatively, enter this amendment and the proposed drawing amendment as it is believed it places this case in better form for appeal..

**Respectively submitted,
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Date: November 21, 2000